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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-----------------------|---------------------|------------------|
| 09/585,568 | 06/02/2000 | Jens Christian Karger | P19296 | 5191 |

7055 7590 03/04/2002

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RESTON, VA 20191

EXAMINER

JIMENEZ, MARC QUEMUEL

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3726

DATE MAILED: 03/04/2002

11

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|-----------------|---------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/585,568 | KARGER ET AL. | |
| | Examiner | Art Unit | |
| | Marc Jimenez | 3726 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-27 and 29-60 is/are pending in the application.
- 4a) Of the above claim(s) 4-10,37,40 and 42-60 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,11-27,29-36,38,39 and 41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>9</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 1, 2, 11-27, 29-36, 38, 39, and 41** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "said metallic fillers" in line 5 which lacks proper antecedent basis.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-3, 11, 14-25, 28-32, 35, 36, 38, 39, and 41** are rejected under 35 U.S.C. 102(b) as being anticipated by Sukenik (3,852,862).

Sukenik teaches the following in *Fig. 1*: an elastic roller comprising: a hard roller core **12**, an elastic (col. 1, line 63, ie. "resiliency") coating layer **13** at an outer side of the hard roller core **12**, the elastic coating layer **13** comprising an elastic matrix material (col. 2, lines 2-3,

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ie. "various inorganic or organic binders") and fillers (col. 2, line 2, ie. "fibers") imbedded in the matrix material (col. 2, line 24, ie. "fiber mix"), wherein a thermal conductivity of metallic fillers (col. 1, lines 61-62, ie. metallic wools) is considerably higher than a thermal conductivity of the matrix material (col. 2, lines 2-3, ie. "various inorganic or organic binders", the fillers are made of metal, hence having a higher conductivity than the matrix material which is made of inorganic or organic binders), at least a portion of the fillers (col. 2, line 2) comprising metallic fillers (col. 1, lines 61-62, ie. "metallic wools"), wherein the roller is structured and arranged for smoothing paper webs.

Note that the hard roller core **12** comprises metal (col. 1, line 55), and the metallic fillers comprises metal (col. 1, lines 61-62), the metallic fillers are metal fibers (col. 2, lines 52-56), a portion of the fibers is aligned in the axial direction (see figure), at least a portion of the fibers comprises a predominant portion of the fibers (col. 2, lines 55-57), at least a portion of the fibers is aligned in the radial direction (see figure), at least a portion of the fibers is aligned in statistical distribution (see figure), the fibers are arranged in one of a fiber layer and radially sequentially arranged fiber layers (see figure), the elastic layer further comprises additional fillers (col. 1, lines 57-63) arranged in the elastic matrix **13**, the additional fillers comprise fibers including at least one of carbon and glass fibers (col. 1, lines 60-61), the additional fillers comprises at least one of quartz and PTFE (col. 1, lines 60-61), the metallic fillers are arranged to extend up to a radially outer surface of the elastic matrix material (see figure), a thermal conductivity of the metallic fillers is considerably higher than a thermal conductivity of the matrix material the metallic fillers are arranged to extend radially inwardly up to a surface of the hard roller core **12**, the thermal expansion coefficient of the metallic fillers is smaller than a thermal expansion

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coefficient of the matrix material (the fillers are made of metal, hence having a smaller thermal expansion coefficient), the roller core and the fillers are made of metal and have substantially the same thermal expansion coefficient, since the layers are “built up” (col. 2, lines 5-10), the coating layer 13 comprises a functional layer (outermost built up layer) arranged in a radially outwardly region and a connecting layer (innermost built up layer closest to the hard roller core 12) arranged in a radially inwardly region, the connecting layer is adapted to connect the functional layer to the hard roller core 12, the metallic fillers are arranged at least in the functional layer (see figure), the matrix material comprises a resin-hardener combination (col. 2, lines 2-3, ie. “inorganic or organic binders”), a concentration of the metallic fillers is substantially uniformly distributed within the elastic matrix material (see figure), and a concentration of the metallic fillers increases in a radially inwardly direction toward the hard roller core (col. 1, lines 43-46 and col. 2, lines 56-60).

With respect to Claim 21, note that the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight.

3. **Claims 1-3, 11, 14-23, 25, 28-31, 33-36, and 38** are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe (4,368,568).

Watanabe teaches the following in *Fig. 1-6*: an elastic roller comprising: a hard roller core 1, an elastic coating layer 2 at an outer side of the hard roller core 1, the elastic coating layer 2 comprising an elastic matrix material and fillers (col. 3, lines 50-65) imbedded in the matrix material, wherein a thermal conductivity of the metallic fillers is considerably higher

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than a thermal conductivity of the matrix material (the fillers are made of metal, hence having a higher conductivity than the matrix material), at least a portion of the fillers comprising metallic fillers (col. 3, lines 65-66), wherein the roller is structured and arranged for smoothing paper webs (col. 1, lines 7-8).

Note that the hard roller core **1** comprises metal (abstract, lines 1-2), and the metallic fillers comprises metal (col. 3, line 65), the metallic fillers are metal fibers (col. 3, line 65), a portion of the fibers is aligned in the axial direction (see figure 5), at least a portion of the fibers comprises a predominant portion of the fibers (see figure 5), at least a portion of the fibers is aligned in the radial direction (see figure 5), at least a portion of the fibers is aligned in statistical distribution (see figure 5), the fibers are arranged in one of a fiber layer and radially sequentially arranged fiber layers (see figure 5), the elastic layer further comprises additional fillers (col. 3, lines 39-68) arranged in the elastic matrix **2**, the additional fillers comprise fibers including at least one of carbon and glass fibers (col. 3, lines 65-66), the metallic fillers are arranged to extend up to a radially outer surface of the elastic matrix material (see figure 5), the metallic fillers are arranged to extend radially inwardly up to a surface of the hard roller core **1**, the thermal expansion coefficient of the metallic fillers is smaller than a thermal expansion coefficient of the matrix material (the fillers are made of metal, hence having a smaller thermal expansion coefficient), the roller core and the fillers are made of metal and have substantially the same thermal expansion coefficient, the matrix material comprises a plastic material (col. 3, lines 50-52), the matrix material comprises a resin-hardener combination (col. 3, lines 50-52), a concentration of the metallic fillers is substantially uniformly distributed within the elastic matrix material (col. 3, lines 50-52),

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With respect to Claim 21, note that the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight.

4. **Claims 1-3, 11, 14-27, 29, 31, 36, 38, 39, and 41** are rejected under 35 U.S.C. 102(b) as being anticipated by Brouwer (5,735,388).

Brouwer teaches the following in *Fig. 5*: an elastic roller comprising: a hard roller core **120**, an elastic coating layer **104** at an outer side of the hard roller core **120**, the elastic coating layer **104** comprising an elastic matrix material and fillers **102** imbedded in the matrix material **104**, wherein a thermal conductivity of the metallic fillers **102** is considerably higher than a thermal conductivity of the matrix material, wherein the roller is structured and arranged for smoothing paper webs.

Note that the metallic fillers **102** penetrate the radially outer surface and the radially outer surface of the elastic matrix material **104** is coated with metal **102** (see outer surface of matrix material **104** which is coated with metal **102**).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. **Claims 12 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sukenik (3,852,862).

Sukenik teaches the invention cited above with the exception of the fillers being made of “metal-coated” fibers.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, the particular structure of the fiber is clearly a matter of designed choice, wherein no significant problems are solved by using a “metal-coated” fiber versus the metal fiber taught by the prior art. It appears that metal fibers would equally as well as “metal-coated” fibers.

Response to Arguments

7. Applicant's arguments filed 1/28/2002 have been fully considered but they are not persuasive.

8. In response to applicant's argument that Sukenik does not teach that the thermal conductivity of the metallic fillers (col. 1, lines 60-63) is not considerably higher than a thermal conductivity of the matrix material (col. 2, lines 2-3), it is noted that metal fibers inherently have a higher thermal conductivity than “inorganic or organic binders”. Also, it is noted that the “matrix material” also can contain ceramic (col. 1, lines 32-34) which has a thermal conductivity lower than metal. Regarding applicant's argument that Sukenik does not teach a roller that is used for smoothing paper webs, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte*

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Masham, 2 USPQ2d 1647 (1987). The roll of Sukenik is clearly capable of being used to smooth paper rolls. Sukenik clearly teaches each of the structural limitations of the claimed roll.

Applicant's arguments with respect to Claims 2, 11, 14-25, 29-32, 35, 36, 38, 39, and 41 fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

9. In response to applicant's argument that Watanabe does not teach that the thermal conductivity of the metallic fillers (col. 3, lines 65-66, ie. "metal fibers") is considerably higher than a thermal conductivity of the matrix material (col. 3, lines 50-65, ie. "thermosetting resin, such as epoxy or unsaturated polyester resin, and/or other liquid resins"). It is clearly understood that metal has a higher thermal conductivity than a thermosetting resin such as epoxy or unsaturated polyester resin. Applicant's disclosure even supports the fact that metal has a higher conductivity than thermosetting resin (see page 3, lines 17-21 and page 9, lines 12-13).

Watanabe teaches a metal filler in a thermosetting resin matrix and therefore anticipates the elastic matrix material as claimed. Applicant's arguments with respect to Claims 2, 11, 14-23, 25, 29-31, 33-36, and 38 fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

10. In response to applicant's argument that Brouwer does not teach that the thermal conductivity of the metallic fillers are considerably higher than a thermal conductivity of the matrix material, it is noted that Brouwer teaches that the matrix material could be made of aluminum (col. 5, line 12) which has a thermal conductivity less than the metallic fillers (col. 5,

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lines 22-26) which can be made of such materials as metal oxides or steel wool. Steel has a higher thermal conductivity than aluminum. Regarding applicant's argument that Brouwer does not teach a roller that is used for smoothing paper webs, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Brouwer clearly teaches each of the structural limitations of the claimed roll. Applicant's arguments with respect to Claims 2, 11, 14-27, 29, 31, 36, 38, 39, and 41 fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

11. Regarding the design choice rejections of claims 12 and 13, it is noted that there has not been a showing of any advantage, particular purpose, or solution to a problem disclosed with the use of metal coated fibers versus the use of metal fibers. As noted in the rejections above, the prior art would have performed equally as well as the claimed invention.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Interviews After Final

13. Applicant note that an interview after a final rejection will not be granted unless the intended purpose and content of the interview is presented briefly, in writing (the agenda of the interview must be in writing) to clarify issues for appeal requiring only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations will be denied. See MPEP 714.13 and 713.09.

Contact Information

14. Telephone inquiries regarding the status of applications or other general questions, by persons entitled to the information, should be directed to the group clerical personnel. In as much as the official records and applications are located in the clerical section of the examining groups, the clerical personnel can readily provide status information. M.P.E.P. 203.08. The Group clerical receptionist number is (703) 308-1148.

If in receiving this Office Action it is apparent to applicant that certain documents are missing, e.g., copies of references cited, form PTO-1449, form PTO-892, etc., requests for copies of such papers or other general questions should be directed to Tech Center 3700 Customer

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Service at (703) 306-5648, or fax (703) 872-9301 or by email to

CustomerService3700@uspto.gov.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is **703-306-5965**. The examiner can normally be reached on **Monday-Thursday and the second Friday of the bi-week, between 9am-6pm.**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Hughes can be reached on 703-308-1806. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

Other helpful telephone numbers are listed for applicant's benefit.

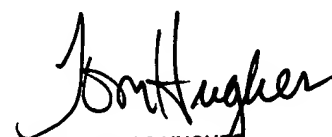
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MJ

February 25, 2002


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